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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,458	04/03/2006	Norbert Lutz	1093-127 PCT/US	8101
23869 7590 01/12/2009 HOFFMANN & BARON, LLP 6900 JERICHO TURNPIKE SYOSSET, NY 11791				
EXAMINER				
LOUIE, WAI SING				
ART UNIT		PAPER NUMBER		
2814				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,458

Applicant(s)

LUTZ ET AL.

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 20-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/ISD)
Paper No(s)/Mail Date 7/6/05, 4/3/06
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group II, claims 20-29, in the reply filed on 10/27/08, is acknowledged. The restriction is final. It is suggested that non-elected claims be canceled in the response to this Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,586,791) in view of Bernds et al. (US 7,229,868).

With regard to claim 20, Lee et al. disclose the fabrication of an organic thin film transistor, OFET, (col. 5, line 8 et seq. and fig. 1), comprising:

- Producing at least one component using organic semiconductor technology (fig. 1), where the at least one component includes a plurality of layers (col. 8, lines 26-68 and fig. 1) and where the plurality of layers includes at least one electrical functional layer 35 (pentacene col. 8, line 66 and fig. 1);
- Lee et al. do not disclose the details of fabrication of the OFET. However, Bernds et al. disclose a UV replicating method for structuring an OFET (Bernds abstract),

where a plurality of layers 1 and 2 to form a spatial structure (fig. 1.3) in a replicated layer 2 by means of UV replication (col. 4, line 29). Lee et al. teach this UV replication process provides a low-cost method for patterning high-resolution OFETs that is suitable for mass production (Bernds col. 1, lines 64-66). Therefore, it would have been obvious to one of ordinary skill in the art to modify Lee's device with the teaching of Berndt et al. to produce an organic semiconductor functional layer with the UV replication process in order to pattern a high-resolution OFET that is suitable for mass production. The electrical functional layer 2 in Berndt is severed in Lee's device as organic semiconductor layer 35 (Lee fig. 1).

With regard to claim 28, in addition to the limitations disclosed in claim 20 above, Lee modified by Berndt et al. also disclose:

- At least one of the plurality of layers is introduced into a film structure having a surface area over the entire surface by a printing web process (Bernds col. 4, line 20).

Claims 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,586,791) modified by Berndt et al. (US 7,229,868) as applied to claim 1 above, and further in view of Deeman et al. (US 6,814,898).

With regard to claim 21, Lee modified by Berndt do not disclose the spatial structure has a structure depth greater than or equal to the thickness of the replicated layer. However, Deeman et al. disclose forming the spatial structure with a thermal imprint lithographic process (fig. 1c)

and sequentially removing the remain of the thermoplastic layer 20 to expose the substrate 18 (Deeman col. 2, lines 23-35). Deeman et al. teach this process is capable to form nano-dimensioned patterns/features (Deeman col. 1, lines 52-55). Thus, it would have been obvious at the time the invention was made to modify Lee's device with the teaching of Bernds and Deeman to form the spatial structure with the above mentioned process in order to be able to produce the nano-dimensioned patterns/features. The spatial structure in Deeman et al. has a depth equal to the thickness of the functional layer.

With regard to claim 22, Lee disclose the spatial structure layer 35 is replicated in an electrode layer comprising an electrical conductive material 25 and 30 (col. 8, line 60) and where the process further comprises applying an electrical functional layer 25 and 30 comprising a semiconducting material 35 to the electrode layer 25 and 30 (fig. 1).

With regard to claim 23, Lee et al. disclose the spatial structure has a structure depth that is less than the thickness of the replicated layer 35 (fig. 1).

With regard to claims 24-25, Lee modified by Bernds et al. disclose the spatial structure layer 2 is UV-cured under the UV lamp 6 (Bernds col. 4, lines 18-35 and fig. 2). This avoids shrinkage in volume (Bernds col. 3, lines 4-8).

With regard to claim 26, Lee modified by Bernds et al. disclose the process further comprising applying an electrical functional layer 8 to the replicated layer 2 and removing the electrical functional layer 8 to a depth such that there remains a functional layer 8 which is structured in a pattern configuration in accordance with the spatial structure 2 (Bernds col. 4, lines 31-36 and fig. 2).

With regard to claim 27, Lee disclose the process further comprises applying an electrode layer 15 comprises a conductive material to the electrical functional layer 25 and 30 (fig. 1).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,586,791) modified by Bernds et al. (US 7,229,868) as applied to claim 1 above, and further in view of Shigeno et al. (US Pub. 2002/0033918).

With regard to claim 29, Lee modified by Bernds do not disclose an optical functional layer are produced by replication process. However, Shigeno et al. disclose an acryl resin layer 15 patterned as a light scattering support layer (Shigeno ¶ [0015] and fig. 1). Shigeno et al. teach the scattering reflector is used to scatter the external light so that the display device can be used in a bright place (Shigeno ¶ [0005]). Hence, it would have been obvious to one of ordinary skill in the art to modify Lee's device with the teaching of Bernds and Shigeno to provide an optical functional layer in conjunction with the electrical functional layer when the OFET is used in a display device in order to scatter the external light so that the display device can be used in a bright place. The scattering layer 15 can be fabricating with Bernds' replication process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is 571-272-1709. The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wai-Sing Louie/
Primary Examiner, Art Unit 2814

Wsl
January 8, 2009.